

Eneopterinae crickets from Costa Rica: an emended list (Orthoptera, Grylloidea)

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ABSTRACT

KEY WORDS
Insecta,
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Eneopterini,
taxonomy,
Costa Rica.

We reexamine the species of Eneopterinae Saussure, 1874 crickets from Costa Rica and conclude that only two species of this clade are present in this country: *Ponca venosa* Hebard, 1928 and the widely distributed species *Eneoptera surinamensis* (De Geer, 1873). The two species described by Otte (2006) under *Eneoptera* Brumeister, 1838 do neither belong to this genus nor to Eneopterinae.

RÉSUMÉ

MOTS CLÉS
Insecte,
orthoptère,
Eneoptera,
Eneopterini,
taxonomie,
Costa Rica.

Les grillons Eneopterinae du Costa Rica : une liste corrigée (Orthoptera, Grylloidea). Nous réexaminons les espèces de grillons Eneopterinae Saussure, 1874 du Costa Rica et concluons que seules deux espèces de ce clade y sont présentes : *Ponca venosa* Hebard, 1928, et l'espèce à large distribution *Eneoptera surinamensis* (De Geer, 1873). Les deux espèces décrites par Otte (2006) sous *Eneoptera* Brumeister, 1838 n'appartiennent ni à ce genre, ni aux Eneopterinae.

INTRODUCTION

As reviewed in Robillard & Desutter-Grandcolas (2005), the cricket subfamily Eneopterinae (sensu Robillard & Desutter-Grandcolas 2008) is little diversified in the Neotropical region compared to other cricket clades (Desutter-Grandcolas 1991, 1992a, b, 1993) and to what is known from this clade in the South-West Pacific (Otte 2007; Desutter-Grandcolas & Robillard 2006; Robillard 2009, 2010, 2011; Robillard *et al.* 2010) or in Australia (Otte & Alexander 1983). In the whole Neotropics, Eneopterinae are represented by only three little speciose genera, *Eneoptera* Burmeister, 1838, *Ligypterus* Saussure, 1878 and *Ponca* Hebard, 1928, known by five, five and two species respectively as reviewed recently (Robillard & Desutter-Grandcolas 2005).

In Costa Rica, only two species were mentioned, despite the large number of specimens examined: *Ponca venosa* Hebard, 1928, and a few specimens of the widely distributed *Eneoptera surinamensis* (De Geer, 1873). However, in his 2006 paper describing 84 new cricket species from La Selva, Costa Rica, Otte (2006) described two new *Eneoptera* species and also mentioned *E. surinamensis*. The third neotropical eneopterine genus, *Ligypterus*, is only present in the north-east of South-America.

In the present paper, we reexamine these new data and reconsider the generic assignment proposed by Otte (2006). We conclude that the two new species do not belong to the genus *Eneoptera* or even to the Eneopterinae; also, the specimens from La Selva station listed as *E. surinamensis* are in fact misidentified specimens of *Ponca venosa*.

SYSTEMATICS

Subfamily ENEOPTERINAE Saussure, 1874
Tribe ENEOPTERINI Saussure, 1874

Genus *Eneoptera* Burmeister, 1838

Eneoptera Burmeister, 1838: 736. — Saussure 1874: 481. — Kirby 1906: 90. — Hebard 1928: 262. — Chopard 1931: 14; 1968: 348. — Desutter 1987:

235; 1990: 239. — Otte 1994: 66. — Robillard & Desutter-Grandcolas 2005: 412. — Eades *et al.* 2013.

Eneoptera Saussure, 1878: 531.

Platydactylus Brullé, 1835: 176.

TYPE SPECIES. — *Gryllus surinamensis* De Geer, 1873.

DISTRIBUTION. — Tropical South and Central America (Argentina, Bolivia, Brazil, Colombia, Costa Rica, Ecuador, French Guiana, Guyana, Panama, Paraguay, Peru, Surinam, Venezuela).

DIAGNOSIS AND REVISION. — See Robillard & Desutter-Grandcolas (2005: 412). The genus *Eneoptera* is well characterised by its medium to large size, head morphology with wide carinated fastigium, male and female forewing venation, metanotal glands in males, and male genitalia.

Eneoptera surinamensis (De Geer, 1773)
(Fig. 1)

Gryllus surinamensis De Geer, 1773: 259. *Platydactylus surinamensis* — Brullé 1835: 176. *Gryllus surinamensis* Guérin-Méneville — 1844: 328. *Eneoptera surinamensis* — Saussure 1874: 483. *Eneoptera surinamensis* — Saussure 1878: 672. *Eneoptera surinamensis* — Kirby 1906: 90. — Hebard 1928: 262. — Chopard 1931: 14; 1968: 348. — Otte 1994: 66. — Robillard & Desutter-Grandcolas 2005: 413. — Eades *et al.* 2013.

Gryllus brasiliensis Olivier, 1791: 634. — Serville 1839: 365. *Eneoptera surinamensis* — Saussure 1874: 483.

Eneoptera brasiliensis Burmeister, 1838: 736. *Eneoptera surinamensis* — Saussure 1874: 483.

Platydactylus bicolor Scudder, 1868: 141. — Saussure 1874: 516. *Eneoptera surinamensis* — Kirby 1906: 90.

Platydactylus subnotatus Walker, 1869: 88. *Eneoptera surinamensis* — Saussure 1874: 483.

Paraeneopterus elegans Giglio-Tos, 1897: 8. *Eneoptera surinamensis* — Hebard 1928: 262.

Platydactylus vicinus Serville, 1839: 369. *Eneoptera surinamensis* — Saussure 1874: 483. *Eneoptera vicina* — Kirby 1906: 90. *Eneoptera surinamensis* — Hebard 1928: 262.

Gryllus servillei Guérin-Méneville, 1844: 829, repeatedly synonymised with *Eneoptera surinamensis* Saussure 1874: 483, 1878: 672. — Kirby 1906: 90. — Chopard 1931: 14; 1968: 348 should not have been considered a distinct species, as this name results from a typographical error

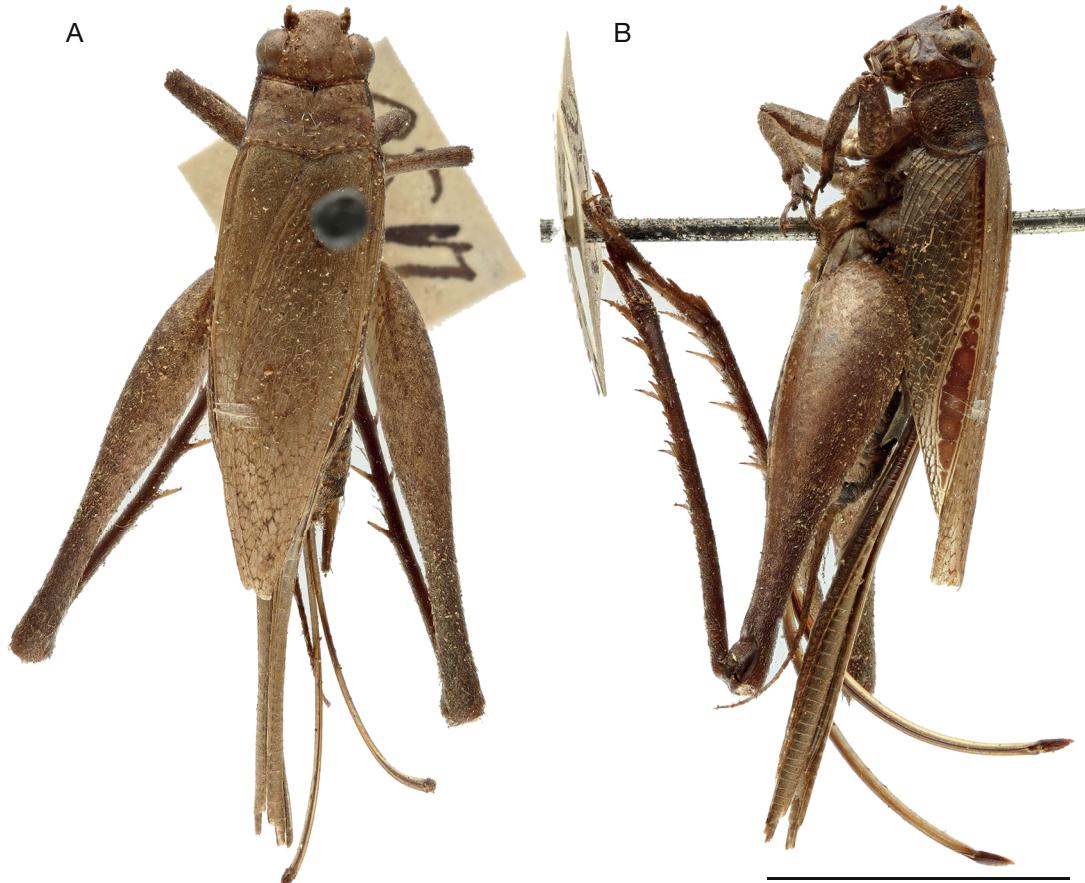


FIG. 1. — Female holotype of *Eneoptera surinamensis* (De Geer, 1773): **A**, dorsal view; **B**, lateral view. Copyright Swedish Museum of Natural History, Stockholm (NHRS), photograph by Gunvi Lindberg (NHRS). Scale bar: 1 cm.

(Guérin-Méneville 1844: 329); Robillard & Desutter-Grandcolas 2005: 413.

TYPE LOCALITY. — Surinam.

HOLOTYPE FEMALE. — [Surinam]: 24.VI. identified *Gr. [Gryllus] surinamensis* by De Geer, NHRS-GU-LI-00000346 (photograph by Gunvi Lindberg, Copyright Swedish Museum of Natural History, Stockholm, NHRS).

EXAMINED MATERIAL FROM COSTA RICA. — No precision, 1 ♂, 2 ♀♀, ex-coll. Biolley, ex-coll. Finot. Surubres, San Mateo, 1 ♀, ex-coll. Pittier (MNHN).

DIAGNOSIS AND REDESCRIPTION. — See Robillard & Desutter-Grandcolas (2005: 416).

The specimens mentioned and photographed by Otte (2006: fig. 59) do neither match the description nor

the photographs of the holotype specimen (Fig. 1). They clearly correspond to the species *Ponca venosa* as redescribed in Robillard & Desutter-Grandcolas (2005).

Eneoptera spodios Otte, 2006

Eneoptera spodios Otte, 2006: 355. — Eades *et al.* 2013.

Species inquirenda, this study.

TYPE LOCALITY. — Costa Rica, Heredia, Estacion Biologica La Selva.

DIAGNOSIS AND REVISION. — According to the forewing venation pattern of the female holotype, there is no doubt that the species described as *Eneoptera spodios* by Otte (2007: fig. 57) does not belong to *Eneoptera* or even to



FIG. 2. — Male of *Ponca venosa* Hebard, 1928 from Costa Rica, La Selva. Photograph by T. Robillard.

Eneopterinae according to general shape of head, large whitish maxillary palpi, and female forewing venation. In particular, the longitudinal veins of dorsal field are straight from base to apex, while they are curved in the other *Eneoptera* species (see in Fig. 1 the photographs of the holotype of *E. surinamensis*). Unfortunately, as the description and photograph do not allow attributing the name *spodios* a genus identification, we are forced to leave it under *Eneoptera* as a *species inquirenda*.

Eneoptera planopos Otte, 2006

Eneoptera planopos Otte, 2006: 355. — Eades *et al.* 2013.

Species inquirenda, this study.

TYPE LOCALITY. — Costa Rica, Heredia, Estacion Biologica La Selva.

DIAGNOSIS AND REVISION. — The species described as *Eneoptera planopos* by Otte (2006: fig. 58) has nothing in common with *Eneoptera* in terms of general morphology, size, colouration, forewing venation, male genitalia. There is no doubt that it does not belong to *Eneoptera* or even to Eneopterinae. Morphology and male genitalia suggest that it may correspond to the genus *Lerneca* Walker, 1869, but photographs and original descriptions are too poor to allow a clear identification. Unfortunately, as the description and photograph do not allow attributing the

name *spodios* a genus identification, we are forced to keep it under *Eneoptera* as a *species inquirenda*.

Genus *Ponca* Hebard, 1928

Ponca Hebard, 1928: 262. — Chopard 1968: 353. — Desutter 1987: 235; 1990: 239. — Otte 1994: 67. — Robillard & Desutter-Grandcolas 2005. — Eades *et al.* 2013: 428.

TYPE SPECIES. — *Ponca venosa* Hebard, 1928.

DISTRIBUTION. — Central America (Costa Rica, Panama, Nicaragua).

DIAGNOSIS AND REVISION. — See Robillard & Desutter-Grandcolas (2005: 428). Among Eneopterinae genera, *Ponca* is characterised by its medium size, contrasted colouration, male forewing venation and ornamentation, absence of metanotal glands in males, and by its male genitalia (shape and location of endophallic sclerite).

Ponca venosa Hebard, 1928

(Fig. 2)

Ponca venosa Hebard, 1928: 262. — Chopard 1968: 353. — Desutter 1987: 235; 1990: 239. — Otte 1994: 67. — Robillard & Desutter-Grandcolas 2005: 429. — Eades *et al.* 2013.

TYPE LOCALITY. — Costa Rica, Vesta Farm, Estrella Valley, 200 ft.

EXAMINED MATERIAL FROM COSTA RICA. — Sarapiquí, La Virgen, 1 ♀, 1920 (P. Serre) (MNHN). Costa Rica: Station biologique La Selva, 10°26'N, 83°59'W (L. Desutter-Grandcolas): 11-13.III.2005, 3 ♂♂ (#1, 45, 46), 2 ♀♀ (#43, 44), jour, litière; 1 ♂ (#67), jour, sur plante de sous-bois (palmier, 1.5 m); 3 juvéniles (#9, 29, 41), jour, litière; 22-25.III.2005, 2 ♀♀ (#10, 11), jour, sur plante de sous-bois, 5 juvéniles (#1, 2, 3, 4, 25), jour, litière (MNHN).

DIAGNOSIS AND DESCRIPTION. — See Hebard's (1928) original description and additional information in Robillard & Desutter-Grandcolas (2005). The specimens identified *E. surinamensis* by Otte (2006) belong to this species according to the photographs of males and females (fig. 59).

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